ABSTRACT OF THE DISCLOSURE

An aqueous thiourea-free gold etching bath for electrolytically etching gold from a microelectronic workpiece. One embodiment of the aqueous thiourea-free bath contains: (a) about 0.5-1.5 M iodide; (b) about 0.1-0.3 M sulfite; and (c) about 1.0-3.0 g/L wetting agent. The bath is useful in a process for electrolytically etching gold from a microelectronic workpiece. A tool system in which the baths and processes of the present invention may be used is also described.